BIOCHEMISTRY, STRESS NO. 883

THE COUNCIL FOR TOBACCO RESEARCH - U.S.A., INC.

COMMITTEE:
Dr. Bing
Dr. Cattell
Dr. Sommers

110 EAST 59TH STREET
NEW YORK, N. Y. 10022

Application For Research Grant

RECEIVED
SEP 29 1972

Date: September 22, 1972

1. Name of Investigator(s): (include Title and Degrees)

Ronald R. Hutchinson, Ph.D. Director of Research
Grace S. Emley, M.A. Research Psychologist

2. Institution & Address:

Research Department
Kalamazoo State Hospital
Kalamazoo, Michigan 49001

3. Short Title of Project:

The Blood Pressure Reductant Effects of Nicotine

4. Proposed Starting Date:

January 1, 1973

5. Anticipated Duration of this Specific Study: 1 year.

Brief Descripton of Objectives or Specific Aims:

The objectives of the proposed research are (1) to record the motoric and cardiovascular changes subsequent to stress in animals and man, (2) to study the reductive effects of acute nicotine administration on these reactions.

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7. Give a Brief Statement of your Working Hypothesis:

It is proposed to determine if and to what extent nicotine has the therapeutic effect of reducing the cardiovascular changes associated with episodes of stress-produced anger in animals and man.

Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

8. *Details of Experimental Design and Procedures: (Attach Separate Pages)*

See Experimental Protocols #1 and #2 attached

9. Physical Facilities Available (Where Other than Administering Organization Indicate Geographical Location)

Facilities statement attached.

10. Additional Requirements:

11. Biographical sketches of all principal and professional personnel (append)

R.R. Hutchinson and G.S. Emley vitae attached.

12. List of publications: (Five most recent as pertinent) (append)

Appendix I

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13. Budget: (1st year)

		% time	Amount
A. Salaries (Personnel by names)			
Professional	R.R. Hutchinson	5%	
	G.S. Emley	5%	
	Research Assistant	100%	REDACTED
Technical			
	Engineering - Consultant	25%	REDACTED
		Sub-Total	
B. Consumable Supplies (list by categories)			420
Animal care: Cages, food, bedding, drugs, etc.	$200		
Human Subject supplies: Lab coats, electrodes, electrode paste, etc.	120		
Misc. Supplies: Recording paper, ink, electrode cabling, alcohol, syringes, antibiotics, etc.	100		
		Sub-Total	780
C. Other Expenses (itemize)			
Graphics & secretarial supplies	100		
4 squirrel monkeys @ $45	180		
Human subject compensation	500		
		Sub-Total	-0-
D. Permanent Equipment (itemize)			
			12,200
E. Overhead (15% of A+B+C)			1,830
		Total	14,030

Estimated Future Requirements:

	Salaries	Consumable Suppl.	Other Expenses	Permanent Equip.	Overhead	Total
Year 2						
Year 3						

It is understood that the applicant and institutional officers in applying for a grant have read and found acceptable the Council's "Statement of Policy Containing Conditions and Terms Under Which Project Grants Are Made."

Signature Ronald R. Hutchinson
Director of Project
R
Telephone

Signature Connie Ulrich
Business Officer of the Institution
R
Telephone

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Background of proposed research

A. Nicotine has been shown to reduce the emotional effects of an immediately preceding stressor in both animals and man (Emley and Hutchinson, 1971; Hutchinson and Emley, 1971; Emley and Hutchinson, 1972; Hutchinson and Emley, 1972). The overt and covert skeletal muscle responses associated with aggressivity and attack produced by stressors are selectively reduced in their frequency and amplitude subsequent to the administration of nicotine in rats, monkeys and man.

B. An established component of the emotion of anger and/or aggression and attack behaviors is a rapid, though temporary, elevation in blood pressure (Cannon, 1970; Ax, 1953; Hutchinson and Emley, 1972). These reactions are each components in the total attack pattern and are organized in the brain stem. The neural effects of nicotine are thought to be concentrated at the medullary level also (Domino, 1967) and probably influence anger and attack action at these brain sites.

C. Since nicotine is already shown to reduce the behavioral components of anger and the behavioral and cardiovascular effects are known to covary and further, since nicotine is known to have a concentrated action at the neural locus already known to mediate both the behavioral and somatic components of anger, strong evidence thus exists for proposing a blood pressure reductant effect of acute nicotine administration.

D. The above thesis may be reconciled with the frequently observed contrary result of peripherally administered nicotine upon blood pressure, as nicotine is known also to have peripheral vasoconstrictor (and thus blood pressure elevating) effects. Further, the elevated blood pressures sometimes reported for chronic cigarette smokers might well only be a correlational association for a continuing behavioral tendency toward nicotine use caused by a need to reduce anger and hostility. The anger conditions may, in fact, be the cause of both the cigarette consumption and the blood pressure elevation, rather than the nicotine causing the blood pressure increases.

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R: REDACTED MATERIAL

VITA

Ronald R. Hutchinson
Director of Research
Kalamazoo State Hospital
Kalamazoo, Michigan 49001

REDACTED

EDUCATION

1. 4 year diploma, General Motors Institute; Majors: Mechanical Engineering, Business Administration. Specialization, Personnel, Research and Administration R
2. M.A., Southern Illinois University, Rehabilitation Counseling-Clinical Psychology, R
3. M.S., Yale University, Experimental Psychology, R
4. Ph.D., Yale University, Experimental Psychology, R

EXPERIENCE

1972-present	Director of Research Kalamazoo State Hospital, Kalamazoo, Michigan 49001.
1968-1972	Director of Research, Fort Custer State Home, Augusta, Michigan 49012.
1970-present	Adjunct Associate Professor, Psychology Department, Western Michigan University. Direct research programs in studies of environmental and physiological causes of emotional behavior and teach instrumentation, physiological psychology, motivation and emotion.
1967-1970	Associate Professor, as above.
1966-1967	Assistant Professor, as above.
1966-1968	Adjunct Associate Professor, Southern Illinois University. Directed Doctoral Candidates.
1963-1966	Adjunct Assistant Professor, Southern Illinois University. Directed Doctoral Candidates, taught Introductory Psychology and Aversive Control.
1962-1966	Medical Research Associate, Behavior Research Laboratory, Anna State Hospital. Coordinated and directed research programs on environmental and physiological causes of aggressive behavior.
1961-1962	Pre-Doctoral Fellowship, United States Public Health Service, Intracranial stimulation, cardiac conditioning salivation, with N.E. Miller, A.R. Wagner, and F.P. Gault.

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R: REDACTED MATERIAL

EXPERIENCE (Cont.)

1960-1961	Research Assistant, N.E. Miller, Yale University. Infra-human research on physiological and environmental influences on behavior.
1959-1960.	Research Associate, Behavior Research Laboratory, Anna State Hospital. Research in learning and performance of hospital patients, infra-human research with N.H. Azrin and W.C. Holz.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS, HONORARY SOCIETIES, COMMUNITY ORGANIZATIONS, ETC.

REDACTED

REDACTED

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MAJOR RESEARCH INTERESTS

The laboratory analysis of behavior. The study of emotional behavior.

SELECTED PUBLICATIONS

Hutchinson, R.R. and Azrin, N.H. Conditioning of mental-hospital patients to fixed-ratio schedules of reinforcement. J. exp. Anal. Behav., 1961, 4, 87-95.

Azrin, N.H., Hutchinson, R.R. and Hake, D.F. Pain-induced fighting in the squirrel monkey. J. exp. Anal. Behav., 1963, 6, 620.

Azrin, N.H., Ulrich, R.E., Hutchinson, R.R., and Norman, D.G. Effect of shock duration on shock-induced fighting. J. exp. Anal. Behav., 1964, 7, 9-11.

Azrin, N.H., Hutchinson, R.R., and Sallery, R.D. Pain-aggression toward inanimate objects. J. exp. Anal. Behav., 1964, 7, 223-228.

Azrin, N.H., Hake, D.F., Holz, W.C., and Hutchinson, R.R. Motivational aspects of escape from punishment. J. exp. Anal. Behav., 1965, 8, 31-44.

Azrin, N.H., Hake, D.F., and Hutchinson, R.R. Elicitation of aggression by a physical blow. J. exp. Anal. Behav., 1965, 8, 55-57.

Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

SELECTED PUBLICATIONS (Cont.)

Azrin, N.H., Hutchinson, R.R., and McLaughlin, R. The opportunity for aggression as an operant reinforcer during aversive stimulation, J. exp. Anal. Behav., 1965, 8, 171-180.

Hutchinson, R.R., Ulrich, R.E., and Azrin, N.H. Effects of age and related factors on the pain-aggression reaction. J. comp. physiol. Psychol., 1965, 59, 365-369.

Ulrich, R.E., Hutchinson, R.R., and Azrin, N.H. Pain-elicited aggression. Psychol. Rec., 1965, 15, 111-126.

Azrin, N.H., Hutchinson, R.R., and Hake, D.F. Extinction-induced aggression. J. exp. Anal. Behav., 1966, 9, 191-204.

Hutchinson, R.R., Azrin, N.H., and Hake, D.F. An automatic method for the study of aggression in squirrel monkeys. J. exp. Anal. Behav., 1966, 9, 233-237.

Hutchinson, R.R., and Renfrew, J.W. Stalking attack and eating behaviors elicited from the same sites in the hypothalamus. J. comp. physiol. Psychol., 1966, 61, 360-367.

Azrin, N.H., Hutchinson, R.R., and Hake, D.F. Attack avoidance and escape reactions to aversive shock. J. exp. Anal. Behav., 1967, 10, 131-148.

Hutchinson, R.R. and Renfrew, J.W. A simple histological technique for localizing electrode tracks and lesions within the brain. J. exp. Anal. Behav., 1967, 10, 277-280.

Hutchinson, R.R. and Renfrew, J.W. Modification of eating and drinking: interactions between chemical agent, deprivation state, and site of stimulation. J. comp. physiol. Psychol., 1967, 63, 408-416.

Azrin, N.H. and Hutchinson, R.R. Conditioning of the aggressive behavior of pigeons by a fixed-interval schedule of reinforcement. J. exp. Anal. Behav., 1967, 10, 395-402.

Hutchinson, R.R., Azrin, N.H., and Renfrew, J.W. Effects of shock intensity and duration on the frequency of biting attack by squirrel monkeys. J. exp. Anal. Behav., 1968, 11, 83-88.

Hutchinson, R.R., Azrin, N.H., and Hunt, G.M. Attack produced by intermittent reinforcement of a concurrent operant response. J. exp. Anal. Behav., 1968, 11, 489-495.

Azrin, N.H., Rubin, H.B., and Hutchinson, R.R. Biting attack by rats in response to aversive shock. J. exp. Anal. Behav., 1968, 11, 633-639.

Hutchinson, R.R. Aggression without victims: An investigative approach. Michigan Mental Health Research Bulletin, Winter, 1970, 4, 32-34.

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

SELECTED PUBLICATIONS (Cont.)

DeFrance, J., and Hutchinson, R.R. Electrical activity of the amygdala and hippocampus during biting. Michigan Mental Health Research Bulletin, Summer, 1970, 4, 28-30.

Emley, G.S., Hutchinson, R.R., and Brannan, I.B. Aggression: effects of acute and chronic morphine. Michigan Mental Health Research Bulletin, Fall, 1970, 4, 23-26.

Hutchinson, R.R., Renfrew, J.W., and Young, G.A. Effects of long-term shock and associated stimuli on aggressive and manual responses. J. exp. Anal. Behav., 1971, 15, 141-166.

Emley, G.S., Hutchinson, R.R., Hallin, E.R., and Kiraley, S. A convenient method for physical storage of cumulative records. J. exp. Anal. Behav., 1971, 15, 248.

DeFrance, J., and Hutchinson, R.R. Epileptiform activity in the baso-lateral amygdala related to aggression. Michigan Mental Health Research Bulletin, Winter, 1971, 5, 36-38.

Emley, G.S., Hutchinson, R.R., and Hunter, N.A. Selective actions of morphine, chlorpromazine, chlordiazepoxide, nicotine and d-amphetamine on shock-produced aggressive and other motor responses in the squirrel monkey. Federation Proceedings, 1971, 30, 390.

Hutchinson, R.R., and Emley, G.S. The behavioral basis of action of tranquilizers. Michigan Mental Health Research Bulletin, Spring, 1971, 5, 19-22.

Emley, G.S., and Hutchinson, R.R. Similar and selective actions of chlor-promazine, chlordiazepoxide, and nicotine on shock-produced aggressive and anticipatory motor responses in the squirrel monkey. Proceedings, 79th Annual Convention, APA, 1971, 759-760.

Emley, G.S., and Hutchinson, R.R. Basis of behavioral influence of chlorpromazine. Life Sciences, 1972, 11, 43-47.

Hutchinson, R.R., and Emley, G.S. Schedule-independent factors contributing to schedule-induced phenomena. In R.M. Gilbert and J.D. Keehn (eds), Schedule Effects Drugs, Drinking, and Aggression, Toronto: University of Toronto Press, 1972, 174-202.

Hutchinson, R.R. and Emley, G.S. Effects of nicotine on avoidance, conditioned suppression and aggression response measures in animals and man. Conference on Motivation in Cigarette Smoking. Council for Tobacco Research, Academic Press, to be published Fall, 1972.

Hutchinson, R.R. Environmental causes of aggression. Nebraska Symposium on Motivation, 1972, U. of Nebraska Press, to be published, 1973.

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

R: REDACTED MATERIAL

VITA

Grace S. Emley
Research Psychologist
Kalamazoo State Hospital
Kalamazoo, Michigan 49001

Born: REDACTED

EDUCATION

M.A. Western Michigan University, Kalamazoo, Michigan, Experimental Psychology, August R

A.B. Chatham College, Pittsburgh, Pennsylvania, Psychology, R

EXPERIENCE

1972-present	Research Psychologist, Research Department, Kalamazoo State Hospital.
1969-1972	Research Psychologist at Research Department, Fort Custer State Home, Augusta, Michigan. Working in research on the effects of pharmacological agents on aggressive behavior.
1968-1969	Graduate Research Assistant with Dr. R.R. Hutchinson, Dept. Psychology, W.M.U. Conducted research on the effects of stimulant and depressant drugs on aggression in the squirrel monkey.
Winter 1968	Computer Programmer, Dr. H. Mitzel, Dept. of continuing Education, Pennsylvania State University. Wrote course material and computer program for a course in medical technology in cooperation with Bethesda Naval Medical School.
1964-1967	Research Assistant to Dr. B.R. Lucchesi, Dr. C.R. Schuster, U. of Michigan Medical School, Ann Arbor, Michigan. Conducted research with humans on the psychological and pharmacological effects of cigarette smoking.
1963-1964	Student assistant to Dr. O.S. Ray, Veterans Administration Hospital, Pittsburgh, Pennsylvania. Conducted research for undergraduate thesis.

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Publications

Ray, O.S., and Emley, G.S. Time factors in interhemispheric transfer of learning. Science, 1964, 144, 76-78.

Ray, O.S., and Emley, G.S. Interhemispheric transfer of learning. Life Sciences, 1965, 4, 271-279.

Lucchesi, B.R., Schuster, C.R., and Emley, G.S. The role of nicotine as a determinant of cigarette smoking frequency in man with observations of certain cardiovascular effects associated with the tobacco alkaloid. Clinical Pharmacology and Therapeutics, 1967, 8, 789-796.

Emley, G.S., Schuster, C.R., and Lucchesi, B.R. Trends observed in the time estimation of three stimulus intervals within and across sessions. Perceptual and Motor Skills, 1968, 26, 391-398.

Schuster, C.R., Lucchesi, B.R., and Emley, G.S. The effects of certain pharmacological agents on the cigarette smoking frequency in man. Paper presented at the AMA-ERF Session on Research on Tobacco and Health, San Francisco, June 19, 1968.

Emley, G.S. The effects of morphine on shock-induced aggression in the squirrel monkey. Unpublished Masters thesis, Western Michigan University, August, 1969.

Emley, G.S., Hutchinson, R.R., and Brannan, I.B. Aggression: effects of acute and chronic morphine. Michigan Mental Health Research Bulletin, Fall, 1970, 4, 23-26.

Emley, G.S., Hutchinson, R.R., Hallin, E.R., and Kiraley, S. A convenient method for physical storage of cumulative records, J. exp. Anal. Behav., 1971, 15, 248.

Emley, G.S., Hutchinson, R.R., and Hunter, N.A. Selective actions of morphine, chlorpromazine, chlordiazepoxide, nicotine, and d-amphetamine on shock-produced aggressive and other motor responses in the squirrel monkey. Federation Proceedings, 1971, 30, 390.

Hutchinson, R.R., and Emley, G.S. The behavioral basis of action of tranquilizers. Michigan Mental Health Research Bulletin, Spring, 1971, 5, 19-22.

Emley, G.S., and Hutchinson, R.R. Similar and selective actions of chlorpromazine, chlordiazepoxide, and nicotine on shock-produced aggressive and anticipatory motor responses in the squirrel monkey. Proceedings, 79th Annual Convention, APA, 1971, 759-760.

Hutchinson, R.R., Emley, G.S. and Sauer, R.A. Effects of cessation of cigarette smoking on jaw clenching frequency in humans. Paper presented at APA, Washington, D.C., 1971.

Emley, G.S. and Hutchinson, R.R. Basis of behavioral influence of chlorpromazine, Life Sciences, 1972, 11, 43-47.

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

Publications (Cont.)

Hutchinson, R.R. and Emley, G.S. Schedule-independent factors contributing to schedule-induced phenomena. In R.M. Gilbert and J.D. Keehn (eds), Schedule Effects Drugs, Drinking, and Aggression, Toronto, University of Toronto Press, 1972, 174-202.

Hutchinson, R.R. and Emley, G.S. Effects of nicotine on avoidance, conditioned suppression and aggression response measures in animals and man. Conference on Motivation in Cigarette Smoking. Council for Tobacco Research, Academic Press, to be published, Fall, 1972.

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Experimental Protocol #1

Subjects:

Two naive adult squirrel monkeys weighing 900 to 1100 grams will be used. Subjects will be maintained on ad libitum food and water throughout the experimental series.

Procedure:

Subjects will be implanted with chronic indwelling cannulae inserted through an incision in the jugular vein in the neck. The distal tip of the cannulae will extend to approximately one-half centimeter above the aortic arch. The methods have already been perfected for a long term monitoring of blood pressure in the squirrel monkey (Herd, Morse Kelleher and Jones, 1968). The exposed tip of the cannulae will be connected to a Statham pressure transducer during recording sessions. Subjects will be tested daily for one hour sessions on programs of response-independent electric shocks delivered to the tail. Shock will be delivered each four minutes. Previous work has shown that a flurry of biting responses will occur immediately subsequent to shock (Hutchinson, Azrin and Hake, 1966). Additionally, it has been shown that subsequent to shock, blood pressure increases will occur (Ferreira, Gollub and Vane, 1969). These conditions will be maintained until response stability is present. Subsequently, subcutaneous doses of nicotine tartrate will be administered in a random dose response procedure. Procedural details of drug administration, dosage, etc., will be as in Hutchinson and Emley (1972). The dependent measures will be correlations between attack and blood pressure elevations and the reduction in these effects as a function of nicotine administration.

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Experimental Protocol #2.

Subjects:

Five adult male human volunteers will serve as subjects. See Appendix 2 for human subject treatment procedures.

Procedure:

Prior to each experimental session, subjects will be prepared for the recording of heart rate, blood pressure, peripheral vasomotor action (vasoconstriction of the left index finger), and contraction of masseter and temporalis muscle of the forehead. Blood pressure will be continuously monitored at the radial artery by the method of constant volume, pressure measurements, already perfected by Pressman and Newgard (1963). Subjects will be seated in a sound-attenuated space and exposed to periodic delivery of pure tones each four minutes. Tone intensity will be 110 db, lasting for 2 seconds. Subsequent to stabilization of baseline conditions, subjects will be given several dosages of nicotine tartrate orally in five ounces of pure distilled water. Dosage will range from 2 to 10 mg. and pre-treatment will be 15 minutes prior to actual testing. The observation of principal interest in this study will be to determine whether nicotine produces a reduction in cardiovascular responses to intense noises similar to the reduction already observed and reported for jaw clenching responses subsequent to noxious stimuli. (Hutchinson and Emley, 1972).

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

References

Ax, A.F. The physiological differentiation between fear and anger in humans. Psychosom. Med., 1953, 15, 433-442.

Cannon, W.B. Bodily changes in pain, hunger, fear and rage. Maryland: McGrath, 1970, 93.

Domino, E.F. Electroencephalographic and behavioral arousal effects of small doses of nicotine: a neuropsychopharmacological study. Ann. New York Acad. Sci., 1967, 142, 216-244.

Emley, G.S. and Hutchinson, R.R. Similar and selective actions of chlorpromazine, chlordiazepoxide, and nicotine on shock-produced aggressive and anticipatory motor responses in the squirrel monkey. Proceedings, 79th Annual Convention, APA, 1971, 759-760.

Emley, G.S. and Hutchinson, R.R. Basis of behavioral influence of chlorpromazine. Life Sciences, 1972, 11, 43-47.

Ferreira, S.H., Gollub, L.R., and Vane, J.R. The release of catecholamines by shocks and stimuli paired with shocks. J. exp. Anal. Behav., 1969 12, 623-631.

Herd, J.A., Morse, W.H., Kelleher, R.T. and Jones, L.G. Arterial blood pressure in the squirrel monkey during behavioral experiments. Fed. Proc., 1968, 27, 743.

Hutchinson, R.R., Azrin, N.H., and Hake, D.F. An automatic method for the study of aggression in squirrel monkeys. J. exp. Anal. Behav., 1966, 9, 233-237.

Hutchinson, R.R. and Emley, G.S. The behavioral basis of action of tranquilizers. Michigan Mental Health Research Bulletin, Spring, 1971, 5, 19-22.

Hutchinson, R.R. and Emley, G.S. Effects of nicotine on avoidance, conditioned suppression and aggression response measures in animals and man. Conference on Motivation in Cigarette Smoking. Council for Tobacco Research, Academic Press, to be published Fall, 1972.

Pressman, G.L. and Newgard, P.M. A transducer for the continuous external measurement of arterial blood pressure. IEEE Transactions on Bio-Medical Electronics, 1963, April, 73-81.

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Facilities

1. Space: Approximately 16,680 square feet.

2. Major Facilities and Equipment:

   a. Equipment fabrication and repair shop: Contains full complement of hand and power tools, standing power machinery (lathes, vertical mill, table and band saws, grinder, etc.).

   b. Electronic testing and repair room: 180 square feet of workbench, with full complement of electronic components and testing equipment.

   c. Animal colony room: Contains food and medication storage, cages, scales, handling benches. Heated and air-conditioned for constant temperature control.

   d. Experiment control room: Includes automated control, monitor, and recording equipment for animal test chambers; program-panel cabinets; files for records; desks, etc., for operators.

   e. Two animal test-chamber rooms: Each contains five large isolation test chambers remotely wired to control room. Air-conditioned for constant temperature control.

   f. Human test chamber rooms: Three Industrial Acoustic Corp. chamber rooms, each within their own individual rooms and connected to a control and monitor room.

   g. Histology lab: Contains cabinets, formica counters, sink, includes space for microtome, analytical balance, microscope, drug refrigerator, drug safe, and appropriate glassware and supplies.

   h. Experimental surgeries (2): Includes operating tables, cabinets, stimulators, polygraphs, oscilloscopes, respirators, stereotaxes, and appropriate supplies and instruments.

   i. Drafting room and Darkroom: Includes two enlargers, print dryer, developing and printing tank, film dryer, and two drafting tables and stools.

   j. Library/conference room: Includes conference table, chairs, periodical racks, reprint files, photocopier, and approximately 500 reference volumes pertinent to physiology and psychology.

   k. Offices (8): Contain usual complement of office furniture and equipment for researchers and secretaries.

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Other Sources of Financial Support

List financial support for research from all sources, including own institution, for this and/or related research projects.

	Title of Project	Source	Amount	Duration
Current	Environmental Causes of Aggression	National Science Foundation	$51,810	4/72 - 4/75
	Causes and Control of Aggression in Man	Office of Naval Research	$37,957	3/72 - 2/73
	Measurement and Facilitation of Cooperative Task Performance	National Aeronautics and Space Administration	$36,000	8/72 - 2/73
Pending				

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APPENDIX I

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

Publications appended.

Hutchinson, R.R., Renfrew, J.W., and Young, G.A. Effects of long-term shock and associated stimuli on aggressive and manual responses. J. exp. Anal. Behav., 1971, 15, 141-166.

Emley, G.S. and Hutchinson, R.R. Similar and selective actions of chlorpromazine, chlordiazepoxide, and nicotine on shock-produced aggressive and anticipatory motor responses in the squirrel monkey. Proceedings, 79th Annual Convention APA, 1971, 759-760.

Hutchinson, R.R., Emley, G.S. and Sauer, R.A. Effects of cessation of cigarette smoking on jaw clenching frequency in humans. Presented at APA, 1971.

Emley, G.S., and Hutchinson, R.R. Basis of behavioral influence of chlorpromazine. Life Sciences, 1972, 11, 43-47.

Hutchinson, R.R. and Emley, G.S. Effects of nicotine on avoidance, conditioned suppression and aggression response measures in animals and man. Conference on Motivation in Cigarette Smoking. Council for Tobacco Research Academic Press, to be published, Fall, 1972.

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APPENDIX 2

10035390S8

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Treatment of Human Subjects

Prior to implementation of any human experimental procedures, they are reviewed in detail by the Institution's Ethics Committee. Measures taken to protect all human subjects include pre- and post- experimental medical examinations, documentation of subject consent and briefing, and subject's knowledge that he is free to withdraw from any experiment at any time.

Subjects for these studies will be asked to complete a medical history questionnaire. Each subject will then be given a complete physical exam before the experiments begin. Ralph M. Hodges, M.D., (Kalamazoo, Michigan) will be giving the physical exams. The examinations will consist of hemoglobin, and urinalysis tests in addition to a general physical exam. Parts of the examination will be repeated at the conclusion of the experiment.

Before each experimental session, the subjects will sign a release form giving their consent to serve in the experimental procedure. The subjects are also protected under the state and institution insurance policy which covers any injury or accident incurred while on the grounds of the Kalamazoo State Hospital. At the end of the experimental session, the subject will sign another form which indicates that he has served in the experiment.

All experiments will be conducted with the subject residing in a sound-attenuated, electrostatically shielded, 6 foot by 6 foot room. There will be full-time audio and visual monitoring of the subject within the chamber, and full-time monitoring of cardiac and behavioral processes by the subjects. A physician will be available at all times and all laboratory personnel will be instructed in normal first aid procedures, including cardiac massage and artificial respiration. Resting cots, smelling salts and blankets are always available as medical support apparatus.

Compounds will be administered by medical personnel. A physician will be in residence at all times during these experiments and all subjects will remain under observation until a physician is sure that all drug effects have dissipated or diminished to a negligible extent and will not interfere with normal functioning. Additionally, subjects will be transported to their place of residence subsequent to this time by laboratory staff and equipment.

Subjects will be paid for all services. Pay will be approximately $5.00 per experimental session, paid at the completion of each session, with a pay bonus to be given at the end of the entire experimental series. The pay bonus will accumulate in an account for each subject and will be earned at a constant rate per session dependent upon regular, prompt daily attendance.

Analysis of results will be as described in previous experiments to determine increases and decreases in post- or pre-noxious event responses and heart rate. Again, though the mood adjective check list and temperament survey do not constitute primary measures in this experiment, they are added as the response cost to both subject and experimenter is minimal, and the potential extension of response generality and impact in clinical circles is high.

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

NAME _____ AGE _____ SEX _____

ADDRESS _____ PHONE _____

DATE OF BIRTH _____ MAPITAL STATUS _____

OCCUPATION _____

ARE YOU A UNITED STATES CITIZEN? YES _____ NO _____

Mediaal history:

1. Do you consider yourself to be in good health at the present time?

   yes--- _____ no _____

2. Have you ever been refused employment, insurance, or rejected from the armed forces because of your health? yes _____ no _____

3. Do you now or have you ever had any of the following illnesses?

	Yes	NO
asthma		
bronchitis		
hay fever		
rheumatic fever		
epilepsy		
tuberculosis		
diabetes		
increased blood pressure		
stomach trouble		
migraine headache		
serious infections		
skin trouble		
arthritis		
tooth ache		
bleeding gums		
bladder or kidney trouble		
nervous or mental disorder		
infectious mononucleosis		
heart trouble		

4. Do you have any allergies to drugs, foods, animals, plants, insects, dust, etc?

   yes _____ no _____ If yes, please explain.

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5. Are you presently under the care of a physician, psychiatrist or thearapist?

yes_____ no_____

6. Are you presently or have you recently received any medication for any reason (including vitamins, pep pills, diet pills, tranquilizers, etc.)?

yes_____ no_____

7. Are you on any special diet? yes_____ no_____

8. Has anyone in your family had any of the following illnesses? (grandparents, parents, brothers, sisters, children)

	yes	no	Relationship
esthma	_____	_____	_____
hay fever	_____	_____	_____
epilepsy	_____	_____	_____
nervous or mental disorder	_____	_____	_____
cancer	_____	_____	_____
heart disease	_____	_____	_____
severe headache	_____	_____	_____
high blood pressure	_____	_____	_____

9. When was your last physical exam?

10. When did you last have a dental check up?

GENERAL INFORMATION

1. Have you ever taken part in any experimental studies? Yes_____ No_____
If yes, did these studies involve any of the following:

	Yes	No
ingestion of food substances	_____	_____
ingestion or injection of drugs	_____	_____
metabolic tests	_____	_____
blood or urine tests	_____	_____
blood pressure recording	_____	_____
abstinence of any sort	_____	_____
heart rate recording	_____	_____
EEG recording	_____	_____
confinement	_____	_____
physical exertion tests	_____	_____
written tests	_____	_____
performance tests	_____	_____
sleep	_____	_____

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

2. Are you right handed? yes_____ no_____

3. Do you wear any of the following:

False teeth or bridge	yes_____	no_____
Hearing aid	_____	_____
Glasses	_____	_____
Braces for teeth	_____	_____

4. Have you ever been bothered by claustrophobia? yes_____ no_____

5. Are you currently enrolled in an educational program of any sort?

yes_____ no_____

6. Please indicate daily or weekly frequency of the following?

a. Sleep (hrs.)

b. Alcohol consumption

c. Exercise (hrs.)

d. Tobacco consumption (cigars, cigarettes, pipe)

e. Chewing gum

f. Coffee

g. Tea

7. Do you suffer from headaches? yes_____ no_____

8. Are you a nail biter or pencil chewer? yes_____ no_____

9. Do you participate actively in sports? yes_____ no_____

Signed_____

Witness_____

Date_____

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

Consent to Experimental Procedure

I, _____ hereby consent to serve as a volunteer experimental subject for the Research Department of the Kalamazoo State Hospital. I have been informed of the experimental procedure. I understand that I may withdraw at anytime from participation in this research.

Signed _____

Witness _____

Date _____

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000

Release From Experimental Procedure

I, _____ have served as a volunteer experimental subject for the Research Department of the Kalamazoo State Hospital.

I felt_____, did not feel_____, unpleasant side effects. If so they were _____

_____

_____

_____

Signed_____

Witness_____

Date_____

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Source: https://www.industrydocuments.ucsf.edu/docs/ftyl0000